ABSTRACT

The aim of this study was to determine whether physical education teachers’ (PETs) views and attitudes towards the use of technology in education differed by gender, educational stage, type of school, age, and number of students in classroom. Study sample consisted of 270 volunteer PETs. A parallel mixed design was used. General screening method was used in the quantitative study and content analysis was used in the qualitative study. Data were collected using the scale of attitudes towards the use of technology in education, and open-ended questions prepared by the researcher. It was determined that PETs who are women, work in high school, their classroom between 26-30 and 36-40 years old have more difficulty in using technology and classroom control in the course. Moreover, PETs working in private schools had more developed technical skills. The results indicate that PETs attitudes towards the use of technological materials should be improved.

INTRODUCTION

Today’s rapidly evolving technology leads to pronounced changes in every sphere of life. Science, technology and innovation capabilities are common indicators of development. One of the factors that makes it possible is education, which plays a key role in the communication of ever-evolving technology to society. Technology is indispensable to offer a high quality education and to ensure academic achievement. Students have difficulty understanding theoretical concepts and ideas whereas using technological materials in education increases the quality of education. Marzano (2009) argues that interaction with the SMART Board significantly increases students’ motivation and classroom achievement. According to Durnali, Orakci and Aksan (2019), EBA (education information networks) provides both interactive
animated, simulated e-contents and social sharing opportunities students can share audio, video and documents by making learning and teaching funny, improving a sense of autonomy, developing reading and listening skills (Orakcı, Durnalı, & Efe, 2018).

Technology is defined as innovations based on new knowledge and methods used to develop skills and to meet needs and desires (Erkeskin, 2001). Having become an integral part of today’s education (Kirschner & Selinger, 2003; Gündüz & Odabaşı, 2004), technology affects students, teachers and learning environments positively and improves teaching quality as pinpointed by Durnalı, Orakcı and Aktan (2019), “for thousands of years, education and training that manifested within a triangle of school-teacher-student has now used new, multifaceted, multi-channel alternatives with the use of technologies in the education system” (p. 228). In this sense, it is obvious that the world is witnessing a rapid change in every field. People should develop new methods, attitudes, skills and ways of working to keep pace with this change. According to Alkan (1997), the education system should also be revised in the face of this rapid social change. An education system with the goal of going beyond the age should be open to innovations and reinvent itself in accordance with the needs of the new era. Therefore, being literate is not enough. The introduction of information technologies (computers and the Internet etc.) into all areas of human activity has led to the emergence of a new type of literacy. Teachers and students are the main stakeholders in each educational system, and therefore, their attitudes towards technology affect how society perceives it (Çakır & Oktay, 2012). An education system that does not involve technology cannot respond to social and individual expectations and needs. Therefore, modernizing the technology used in education is, or should be, one of the top priorities (Karasar, 2004).

The widespread use of technology in education has made educational technology a branch of science. Educational technology is closely associated with the teaching process and helps students acquire learning outcomes (Yılmaz, 2007). According to Hizal (1990, p. 6), educational technology is a science that explores methods and strategies to organize appropriate educational settings. According to Şimşek (1997, p. 5), educational technology is a science that investigates the most effective use of materials for conveying knowledge and making it permanent in the process of learning and teaching. According to Doğdu and Aslan (1993, p.16), educational technology is the most efficient use of educational elements. In general, educational technology is a science that increases the quality and efficiency of educational processes and seeks answer to the question “How to teach?” in education (Uşun, 2000, p. 6).

According to Özbilgin (1991, p. 155), technology in education refers to the use of technological tools of physical sciences to reduce costs, to provide rich lives, to support teaching and to individualize. As emphasized by Durnalı (2019) as well, the use of technological tools such as televisions, satellites, computer networks, radios, computers and interactive videos is the technical aspect of the relationship between education and technology.

The use of tools in education facilitates learning and achieves learning retention. Sönmez (1998, p. 134) defines teaching materials as things that help students develop terminal behavior in educational environments. Tool is defined as a mechanical device and generally an expensive and continuous content of life. The educational literature defines the components involving in education as educational tools. Binbasıoğlu (1994, p. 255) defines tools as continuous things used to do any work or to scrutinize something and defines teaching materials as non-continuous things used to do any work.

The use of materials in education provides multiple learning environments and improves learning retention by increasing the number of sensory organs involved in learning (Yalın, 2003). Learning is a set of actions involving many sensory organs. Büyükkaragöz and Çivi (1998) argue that sight, hearing, taste, smell and touch affect learning 83%, 11%, 1%, 3.5% and 1.5%, respectively. People recall 10% of